



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,950	10/24/2006	Sebastian Althen	2003P10350WOUS	8448

22116 7590 11/12/2009  
SIEMENS CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
170 WOOD AVENUE SOUTH  
ISELIN, NJ 08830

EXAMINER
----------

RIVIERE, HEIDI M

ART UNIT	PAPER NUMBER
----------	--------------

3689

MAIL DATE	DELIVERY MODE
-----------	---------------

11/12/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,950	<b>Applicant(s)</b> ALTHEN ET AL.	
	<b>Examiner</b> HEIDI RIVIERE	<b>Art Unit</b> 3689	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 37-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 37-51 is/are rejected.
- 7) ☒ Claim(s) 51 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/26/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Information Disclosure Statement***

1. The Information Disclosure Statement filed on **26 January 2006** has been considered. An initialed copy of the Form 1449 is enclosed herewith.

### ***Claim Objections***

2. Claim 51 objected to because of the following informalities: "via a interconnected computer" should be "via an interconnected computer". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claims 37-48** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5. In order for a method to be considered a "process" under §101, a claimed process must either: (1) be tied to a particular machine or (2) transform underlying subject matter (such as an article or materials). *In re Bilski*, 545 F. 3d 943, 88 USPQ2d 1385 (Fed. Cir. 2008); *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). If neither of these requirements is met by the claim, the

Art Unit: 3689

method is not a patent eligible process under §101 and is non-statutory subject matter. With respect to claims 37-48, the claim language does not include the required tie or transformation and thus is directed to nonstatutory subject matter. These claims are not tied to a machine in that at least one of the main limitations of claim 37, for example is not tied to a machine. Furthermore, these claims present the manipulation of data and as such cannot be said to have subject matter transformation.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 37-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hung et al. (US 6/587,754 B2)** (hereinafter "**Hung**") in view of **McDaniel et al. (US 5/105,365)** (hereinafter "**McDaniel**").

8. **With respect to claim 37:** (new) Hung teaches:

- the sequences analyzed by a standardized diagnostic method that identifies areas where improvement to the sequences can be attained, the sequence analysis including consideration of: (Hung: col. 5, lines 15-65 – "utility use meters (hereinafter "meters") monitor and measure the delivered utility amounts"; meters include but are not limited to fuel meter and electricity meter; the can be

Art Unit: 3689

digital, analog, mechanical meter as well as broad-band spectrum modems; col. 6, lines 1-15 – secondary meters used at branch locations; utility passage amount along utility deliver lines can be monitored, measured, and recorded)

- a. energy flows of the facility, the energy flow path including:
  - i. purchase of the energy from an energy provider,
  - ii. consumption of the energy within the facility in a core process, the core process being a process that is specific to an industry sector whose main focus contains the sector-specific know-how of the facility, conversion of the energy in a secondary process, the secondary process being a process that provides the core process with necessary resources for the core process to function, discharge of the energy from the facility; (Hung: col. 10, lines 10-25 – delivery and energy costs; col. 5, lines 15-45 – “a fuel meter 140 monitoring and measuring a fuel, such as natural gas, fuel oil, or coal used to generate steam via delivery line 138; an electricity meter 150 monitoring and measuring electricity supplied to the steam generation area via electric supply line 148”) and
- utilizing computerized information and data-processing systems to assist the analysis of the energy flows through the core and secondary processes; monitoring energy-relevant data from the

Art Unit: 3689

core and secondary processes; storing energy-relevant data from the core and secondary processes; (Hung: col. 6, lines 13-62 - “examples for meter data control unit 29 are microcomputers, work stations, mainframe computers, program logic controllers (“PLCs”) with memory”; meter data recorded and stored; col. 5, lines 15-45 – “a fuel meter 140 monitoring and measuring a fuel, such as natural gas, fuel oil, or coal used to generate steam via delivery line 138; an electricity meter 150 monitoring and measuring electricity supplied to the steam generation area via electric supply line 148”)

- measuring and allocating to the core and secondary processes the energy consumption levels of the core and secondary processes; (Hung: col. 5, lines 15-65 – “utility use meters (hereinafter “meters”) monitor and measure the delivered utility amounts”; meters include but are not limited to fuel meter and electricity meter; the can be digital, analog, mechanical meter as well as broad-band spectrum modems; col. 6, lines 1-15 – secondary meters used at branch locations; utility passage amount along utility deliver lines can be monitored, measured, and recorded)
- analyzing the energy-relevant data via: determining production planning for the core process utilizing a first predefined standardized analysis package that is independent of the industry sector; determining production planning for the secondary process utilizing a second predefined standardized analysis package that is

Art Unit: 3689

independent of the industry sector; determining energy cost reduction measures for the core and secondary processes based upon the energy-relevant data analysis; and implementing the energy cost reduction measures for the core and secondary processes. (Hung: col. 10, line 10-col. 11, line 45 – energy cost determined; data processing module include operational and manufacturing needs; Predictive analytical tools enable steam generation management system 10 to predict estimated future steam needs and develop purchasing schemes; col. 11, lines 45-65 – real time analysis can be provided for operators operating production equipment in production area and steam delivery systems)

Hung does not teach, however McDaniel teaches:

- a plurality of operation process sequences performed within the facility, (McDaniel: col. 3, lines 1-35 – industrial facility monitored)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hung and McDaniel. Both references deal with an industrial process. While Hung teaches the energy conversion on metering McDaniel teaches that the monitored facility is an industrial facility with processes to be monitored. The Hung facility can be a multi-process facility that converts and then utilizes the steam energy however this is merely implicit in the written description.

Art Unit: 3689

9. **With respect to claim 38:** (new) Hung teaches the limitations cited in the rejections above. Hung does not teach, however McDaniel teaches the standardized diagnostic method comprises a computer aided interview of middle or upper management. (McDaniel: Figs. 5a, 5b, 6a, 6b, 6c, 7a; col. 3, lines 1-45; col. 9, line 50-col. 10, line 65 – management data input related to substances; inputted data stored in database; data input fields)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hung and McDaniel. Both references deal with an industrial process. While Hung teaches the energy conversion on metering McDaniel teaches that the monitored facility is an industrial facility with processes to be monitored. The Hung facility can be a multi-process facility that converts and then utilizes the steam energy however this is merely implicit in the written description.

10. **With respect to claim 39:** (new) Hung teaches the limitations cited in the rejections above. Hung does not teach, however McDaniel teaches wherein the operational process sequences are analyzed by using predefined energy-relevant questions which are independent of the industry sector. (McDaniel: Figs. 5a, 5b, 6a, 6b, 6c, 7a; col. 9, line 50-col. 10, line 65 – management data input related to substances; inputted data stored in database; data input fields)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hung and McDaniel. Both references deal with an industrial process. While Hung teaches the energy conversion on metering McDaniel teaches that the monitored facility is an industrial facility with



Art Unit: 3689

processes to be monitored. The Hung facility can be a multi-process facility that converts and then utilizes the steam energy however this is merely implicit in the written description.

11. **With respect to claim 40:** (new) Hung teaches wherein the standardized analysis methods utilize standardized concepts, standardized calculation models, and standardized process analyses to determine potential for reducing energy costs. (Hung: col. 5, lines 15-65 – “utility use meters (hereinafter “meters”) monitor and measure the delivered utility amounts”; meters include but are not limited to fuel meter and electricity meter; the can be digital, analog, mechanical meter as well as broad-band spectrum modems; col. 6, lines 1-15 – secondary meters used at branch locations; utility passage amount along utility deliver lines can be monitored, measured, and recorded)

12. **With respect to claim 41:** (new) Hung teaches wherein the analysis of the computerized information, data processing systems and energy purchasing and discharge is performed using a third predefined standardized analysis package. (Hung: col. 6, lines 13-62 - “examples for meter data control unit 29 are microcomputers, work stations, mainframe computers, program logic controllers (“PLCs”) with memory”; meter data recorded and stored; col. 5, lines 15-45 – “a fuel meter 140 monitoring and measuring a fuel, such as natural gas, fuel oil, or coal used to generate steam via delivery line 138; an electricity meter 150 monitoring and measuring electricity supplied to the steam generation area via electric supply line 148”)

Art Unit: 3689

13. **With respect to claim 42:** (new) Hung teaches the limitations cited in the rejections above. Hung does not teach, however McDaniel teaches country specific regulations are considered during the energy-relevant analysis step, the regulations selected from the group consisting of: standards, subsidies, and financial aids. (McDaniel: col. 1, lines 15-40 – federal, state, local and company standards)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hung and McDaniel. Both references deal with an industrial process. While Hung teaches the energy conversion on metering McDaniel teaches that the monitored facility is an industrial facility with processes to be monitored. The Hung facility can be a multi-process facility that converts and then utilizes the steam energy however this is merely implicit in the written description.

14. **With respect to claim 43:** (new) Hung teaches the limitations cited in the rejections above. Hung does not teach, however McDaniel teaches the industrial facility is selected from the group consisting of: paper and pulp production facility, steel works, hospital, shipyard hotel, chemical plant, cement factory, underground system, railway system, container terminal, and drilling rig. (McDaniel: col. 3, lines 5-30 – industrial facility)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hung and McDaniel. Both references deal with an industrial process. While Hung teaches the energy conversion on metering McDaniel teaches that the monitored facility is an industrial facility with

Art Unit: 3689

processes to be monitored. The Hung facility can be a multi-process facility that converts and then utilizes the steam energy however this is merely implicit in the written description.

Furthermore, the data identifying "type of facility" is non-functional descriptive data.

When presented with a claim comprising descriptive material, an Examiner must determine whether the claimed nonfunctional descriptive material should be given patentable weight. The Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art. *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401,404 (Fed. Cir. 1983). The PTO may not disregard claim limitations comprised of printed matter. *See Gulack*, 703 F.2d at 1384-85, 217 USPQ at 403; *see also Diamond v. Diehr*, 450 U.S. 175, 191, 209 USPQ 1, 10 (1981). However, the examiner need not give patentable weight to descriptive material absent a new and unobvious functional relationship between the descriptive material and the subset. *See In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994); *In re Ngai*, 367 F.3d 1336, 1338, 70 USPQ2d 1862, 1863-64 (Fed. Cir. 2004). Thus, when the prior art describes all the claimed structural and functional relationships between the descriptive material and the subset, but the prior art describes a different descriptive material than the claim, then the descriptive material is nonfunctional and will not be given any patentable weight. That is, such a scenario presents no new and unobvious functional relationship between the descriptive material and the subset.

Art Unit: 3689

The Examiner asserts that the data identifying "type of facility" adds little, if anything, to the claimed acts or steps and thus do not serve as limitations on the claims to distinguish over the prior art. MPEP 2106IV b 1(b) indicates that "nonfunctional descriptive material" is material "that cannot exhibit any functional interrelationship with the way the steps are performed". Any differences related merely to the meaning and information conveyed through data, which does not explicitly alter or impact the steps is non-functional descriptive data. The subjective interpretation of the data does not patentably distinguish the claimed invention.

15. **With respect to claim 44:** (new) Hung teaches the limitations cited in the rejections above. Hung does not teach, however McDaniel teaches the standardized procedure is predefined within a method handbook. (McDaniel: col. 1, lines 15-42 – publication utilized "Manager's Guide to SHEA Compliance Management System")

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hung and McDaniel. Both references deal with an industrial process. While Hung teaches the energy conversion on metering McDaniel teaches that the monitored facility is an industrial facility with processes to be monitored. The Hung facility can be a multi-process facility that converts and then utilizes the steam energy however this is merely implicit in the written description. McDaniel teaches the implementation of a guide within the system.

Art Unit: 3689

16. **With respect to claim 45:** (new) Hung teaches the limitations cited in the rejections above. Hung does not teach, however McDaniel teaches the energy-relevant questions and the energy-relevant data analysis are stored in a knowledge database. (McDaniel: Figs. 5a, 5b, 6a, 6b, 6c, 7a; col. 9, line 50-col. 10, line 65 – management data input related to substances; inputted data stored in database; data input fields)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hung and McDaniel. Both references deal with an industrial process. While Hung teaches the energy conversion on metering McDaniel teaches that the monitored facility is an industrial facility with processes to be monitored. The Hung facility can be a multi-process facility that converts and then utilizes the steam energy however this is merely implicit in the written description.

17. **With respect to claim 46:** (new) Hung teaches the limitations cited in the rejections above. Hung does not teach, however McDaniel teaches the questions and energy-relevant data that are stored in the knowledge database are optimized based upon the experience gained by the facility. (McDaniel: Figs. 5a, 5b, 6a, 6b, 6c, 7a; col. 9, line 50-col. 10, line 65 – management data input related to substances; inputted data stored in database; data input fields)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hung and McDaniel. Both references deal with an industrial process. While Hung teaches the energy conversion on metering McDaniel teaches that the monitored facility is an industrial facility with

Art Unit: 3689

processes to be monitored. The Hung facility can be a multi-process facility that converts and then utilizes the steam energy however this is merely implicit in the written description.

18. **With respect to claim 47:** (new) Hung teaches the limitations cited in the rejections above. Hung does not teach, however McDaniel teaches the process steps are repeated annually to verify the effectiveness and proper implementation of the measures. (McDaniel: Col. 4, Lines 10-45 – yearly substance sampling)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hung and McDaniel. Both references deal with an industrial process. While Hung teaches the energy conversion on metering McDaniel teaches that the monitored facility is an industrial facility with processes to be monitored. The Hung facility can be a multi-process facility that converts and then utilizes the steam energy however this is merely implicit in the written description.

19. **With respect to claim 48:** (new) Hung teaches the cost reduction determination is performed by an energy service provider. (Hung: col. 10, line 10-col. 11, line 45 – energy cost determined; data processing module include operational and manufacturing needs; Predictive analytical tools enable steam generation management system 10 to predict estimated future steam needs and develop purchasing schemes; col. 11, lines 45-65 – real time analysis can be provided for operators operating production equipment in production area and steam delivery systems)

20. **With respect to claim 49:** (new) Hung teaches:

- i. purchase of the energy from an energy provider, consumption of the energy within the facility in a core process, the core process being a process that is specific to an industry sector whose main focus contains the sector-specific know-how of the facility, conversion of the energy in a secondary process, the secondary process being a process that provides the core process with necessary resources for the core process to function, discharge of the energy from the facility, considering the core and secondary processes in order to determine potential cost reductions; (Hung: col. 10, lines 10-25 – delivery costs; col. 5, lines 15-45 – “a fuel meter 140 monitoring and measuring a fuel, such as natural gas, fuel oil, or coal used to generate steam via delivery line 138; an electricity meter 150 monitoring and measuring electricity supplied to the steam generation area via electric supply line 148”) and
- a knowledge database accessible to the facility via the network, comprising:
  - ii. predefined energy-relevant questions that are independent of the industry sector for a standardized diagnostic method for the analysis of the operational process sequence;
    - (1) first predefined standardized analysis packages that are independent of the industry sector for the standardized

Art Unit: 3689

analysis method for the analysis of the core process; second predefined standardized analysis packages that are independent of the industry sector for the standardized analysis method for the analysis of the secondary process; third predefined standardized analysis packages for a standardized analysis method for the analysis of: computerized information and data-processing systems, energy purchasing, and discharge from the facility; having experience obtained regionally or globally in connection with the reduction of energy costs. (Hung: col. 5, lines 15-65 – “utility use meters (hereinafter “meters”) monitor and measure the delivered utility amounts”; meters include but are not limited to fuel meter and electricity meter; the can be digital, analog, mechanical meter as well as broad-band spectrum modems; col. 6, lines 1-15 – secondary meters used at branch locations; utility passage amount along utility deliver lines can be monitored, measured, and recorded; col. 6, lines 13-62 - “examples for meter data control unit 29 are microcomputers, work stations, mainframe computers, program logic controllers (“PLCs”) with memory”; meter data recorded and stored; col. 5, lines 15-45 – “a fuel meter 140 monitoring and measuring a fuel, such as natural gas, fuel oil, or coal used to generate steam via delivery line 138; an



Art Unit: 3689

electricity meter 150 monitoring and measuring electricity supplied to the steam generation area via electric supply line 148”)

Hung does not teach, however McDaniel teaches a method hand book accessible to the facility via an interconnected computer network for predefining a standardized procedure for a holistic consideration of the energy flow through the facility, the energy flow path including: (McDaniel: col. 1, lines 15-42 – publication utilized “Manager’s Guide to SHEA Compliance Management System)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hung and McDaniel. Both references deal with an industrial process. While Hung teaches the energy conversion on metering McDaniel teaches that the monitored facility is an industrial facility with processes to be monitored. The Hung facility can be a multi-process facility that converts and then utilizes the steam energy however this is merely implicit in the written description.

21. **With respect to claim 50:** Hung teaches the limitations cited in the rejections above. Hung does not teach, however McDaniel teaches the knowledge database is optimized based upon the experience and knowledge gained in the facility. (McDaniel: Figs. 5a, 5b, 6a, 6b, 6c, 7a; col. 9, line 50-col. 10, line 65 – management data input related to substances; inputted data stored in database; data input fields)

Art Unit: 3689

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hung and McDaniel. Both references deal with an industrial process. While Hung teaches the energy conversion on metering McDaniel teaches that the monitored facility is an industrial facility with processes to be monitored. The Hung facility can be a multi-process facility that converts and then utilizes the steam energy however this is merely implicit in the written description. Data analysis and collection is done at a frequency of weekly, monthly, and annually for example.

22. **With respect to claim 51:** Hung teaches hardware and software tools for supporting the standardized procedure are provided to the facility locally by an on site installation or via a interconnected computer network. (Hung: col. 6, lines 35-50 – microcomputers and workstations used for example)

Art Unit: 3689

### **CONCLUSION**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heidi Riviere whose telephone number is 571-270-1831. The examiner can normally be reached on Monday-Friday 9:00am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janice Mooneyham can be reached on 571-272-6805. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. R./  
Examiner, Art Unit 3689

/Janice A. Mooneyham/  
Supervisory Patent Examiner, Art Unit 3689